

CLAIMS

1. Agent for promoting the adhesion to a heat-insulating surface, in particular a polystyrene surface, especially when wet or under the effect of a large variation in temperature, based on a phosphate monoester, diester or triester or a mixture thereof.

2. Agent according to Claim 1, characterized in that the said phosphate monoester, diester or triester is a compound of formula (I) below:



in which:

R1, R2 and R3, which may be identical or different, represent:

- a hydrogen atom, or
- a linear, branched or cyclic, saturated or unsaturated alkyl radical containing from 1 to 22 carbon atoms, preferably from 2 to 12 carbon atoms and even more preferentially from 2 to 8 carbon atoms, optionally substituted with halogen atoms, such as fluorine or chlorine, hydroxyl groups, ether groups containing between 1 and 12 carbon atoms and preferably between 1 and 6 carbon atoms, thioether groups, ester groups, amide groups, carboxyl groups, sulfonic acid groups, carboxylic anhydride groups and/or carbonyl groups, or
- an aryl radical containing from 6 to 22 carbon atoms and preferably from 6 to 8 carbon atoms, optionally substituted with halogen atoms, such as fluorine or chlorine, hydroxyl groups, ether groups containing between 1 and 12 carbon atoms and preferably between 1 and 6 carbon atoms, thioether groups, ester groups, amide groups, carboxyl groups, sulfonic acid groups, carboxylic anhydride groups and/or carbonyl groups,

it being understood that at least one of the substituents R1, R2 or R3 is other than a hydrogen atom.

3. Agent according to either of Claims 1 and 2, characterized in that the phosphate monoester, diester or triester of formula (I) is chosen from:

- tris(2-ethylhexyl) phosphate,
- tris(2-butoxyethyl) phosphate,
- di(2-ethylhexyl) phosphate,
- mono(2-ethylhexyl) phosphate,
- tris(2-isooctyl) phosphate,
- tricresyl phosphate,
- cresyl diphenyl phosphate,

- trixylyl phosphate
- triphenyl phosphate,
- tributyl phosphate,
- triethyl phosphate,
- tris(2-chloroethyl) phosphate,

or a mixture thereof.

4. Agent according to one of Claims 1 to 3, characterized in that the phosphate monoester, diester or triester is adsorbed onto an inert mineral support chosen from silica, alumina, silica-alumina, sodium silicoaluminate, calcium silicate, magnesium silicate, zirconia, magnesium oxide, calcium oxide, cerium oxide and titanium oxide.

5. Water-insoluble film-forming polymer composition comprising a phosphate monoester, diester or triester according to one of Claims 1 to 4.

6. Composition according to Claim 5, characterized in that the composition is in the form of an aqueous dispersion of water-insoluble film-forming polymer (latex) or is in the form of a redispersible latex powder.

7. Composition according to either of Claims 5 and 6, characterized in that the amount of phosphate monoester, diester or triester is between 0.02% and 25% by weight of phosphate monoester, diester or triester relative to the weight of the dry latex.

8. Composition according to Claim 7, characterized in that the amount of phosphate monoester, diester or triester is between 1% and 5% by weight of phosphate monoester, diester or triester relative to the weight of the dry latex.

9. Composition according to one of Claims 5 to 8, characterized in that the water-insoluble film-forming polymer is obtained by polymerization of monomers chosen from:

- vinyl esters of branched or unbranched, saturated monocarboxylic acids containing from 1 to 16 carbon atoms, for instance vinyl acetate, vinyl propionate, vinyl neodecanoate, vinyl pivalate, vinyl butyrate, vinyl 2-ethylhexylhexanoate or vinyl laurate, and more particularly vinyl acetate;
- alkyl acrylates and methacrylates, the alkyl group of which contains from 1 to 10 carbon atoms, for example methyl, ethyl, n-butyl or 2-ethylhexyl acrylate or methacrylate;
- vinylaromatic monomers, in particular styrene;

these monomers possibly being copolymerized with each other or with other ethylenically unsaturated monomers chosen from ethylene and olefins, for instance isobutene or α -

olefins containing from 6 to 20 carbon atoms and preferably from 8 to 14 carbon atoms; esters of unsaturated monocarboxylic or dicarboxylic acids containing 3 to 6 carbon atoms with alkanols containing 1 to 10 carbon atoms, for instance methyl, ethyl, butyl or ethylhexyl maleate or fumarate, vinylaromatic monomers such as methylstyrenes or vinyltoluenes; vinyl halides such as vinyl chloride or vinylidene chloride; diolefins, particularly butadiene; (meth)allylic esters of (meth)acrylic acid, (meth)allylic esters of maleic, fumaric, crotonic and itaconic acid monoesters and diesters, and also alkene derivatives of acrylic and methacrylic acid amides, such as N-methallylmaleimide to form homopolymers, copolymers or terpolymers.

10. Use of the composition according to one of Claims 7 to 9, as adhesion primer on a heat-insulating support and in particular a polystyrene support.

11. Mineral binder composition comprising a phosphate monoester, diester or triester as defined in one of Claims 1 to 4.

12. Composition according to Claim 11, characterized in that the mineral binder is a hydraulic binder chosen from cements, especially of Portland, aluminous or blast-furnace type, fly ash, calcined shales or pozzolans and in that the amount of phosphate monoester, diester or triester is between 0.01% and 50% by dry weight of phosphate monoester, diester or triester relative to the total weight of the composition.

13. Composition according to Claim 12, characterized in that the amount of phosphate monoester, diester or triester is between 0.02% and 2% by dry weight of the phosphate monoester, diester or triester relative to the total weight of the composition.

14. Use according to one of Claims 11 to 13, characterized in that the support material is composed of concrete, bricks, cellular concrete, agglomerated concrete (breeze block), fibrocement, masonry or wall rendering.